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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/605,688

10/17/2003

Amarendra Anumakonda

19441-0013

2687

29052

7590

09/29/2006

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EXAMINER

WARTALOWICZ, PAUL A

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/605,688

Applicant(s)

ANUMAKONDA ET AL.

Examiner

Paul A. Wartalowicz

Art Unit

1754

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 11 September 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).


4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 7-18.
Claim(s) withdrawn from consideration: 1-6.


AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Attached.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.


ALLEN P. COOKE
PRIMARY EXAMINER


Paul Wartalowicz
9/25/06

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Continuation of 11)

Applicant argues that Anumakonda does not teach a plurality of catalytic partial oxidation reactors disposed in a shell parallel to and spaced from one another such that each is offset from another nor does Anumakonda teach passing a heat exchange fluid past a plurality of catalytic partial oxidation reactors in the same direction of reactant flow. This argument is not persuasive for the following reasons.

Anumakonda is not relied upon to teach a plurality of catalytic partial oxidation reactors disposed in a shell parallel to and spaced from one another such that each is offset from another or passing a heat exchange fluid past a plurality of catalytic partial oxidation reactors in the same direction of reactant flow. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues Isogaya teaches away from passing a heat exchange fluid past a plurality of catalytic partial oxidation reactors in the same direction of reactant flow, which keeps the feed gas mixture in the pre-catalyst zone cool and that Isogaya teaches that the inlet should be maintained at a high temperature to prevent carbon deposition. This argument is not persuasive for the following reasons.

That Isogaya teaches that the inlet should be maintained at a high temperature to prevent carbon deposition is not limiting in light of the present invention.

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This is because the temperature of the inlet is a feature not claimed. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the temperature of the inlet) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Isogaya also teaches that the temperature of the exit bed must be at least 800 °C for the purpose of preventing carbon deposition (col. 4, lines 45-52). This is some evidence that the teaching of Isogaya does not teach away from the claimed invention and also there is motivation for the obviousness of the present invention. Wojtowicz adds to this motivation by reciting "the CO oxidizer (exothermic reaction) could be coupled with, or complemented by, a heat-recovery unit in which excess hydrogen from the *outlet* of the fuel cell" (paragraph 0079, lines 19-24).

Applicant argues that Marchland teaches away from cooling from the present invention because Marchland discloses cooling the downstream portion of the reactor bed with a coolant flowing in the direction opposite the reactant flow so that higher temperature results in the upstream portion of the bed. This argument is not persuasive for the following reasons.

The teachings of Marchland are not restricted to a particular embodiment, such as one in which the heat of a particular reaction is transported upstream. Marchland teaches that when the pre-oxidizer is replaced with a first-stage selective oxidizer, the

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exothermic oxidation reactions resulting from the first-stage selective oxidizer would provide heat for shift reactor (downstream of the first-stage selective oxidizer) (paragraph 0133, lines 1-9). This is evidence that Marchland does not teach away from the present invention but teaches that the limitation of the heat-exchange liquid flow in the same direction of the reactant flow is obvious to one of ordinary skill in the art at the time applicant's invention was made.

The arguments directed to the amendment of "plurality of catalytic partial oxidation reactors...parallel to and spaced from one another such that each is offset from another", have not been addressed because the amendments have not been entered.